

## Chronic Disease Indicators: Indicator Definition



### Amputation of a lower extremity attributable to diabetes

Category:	Diabetes
Demographic Group:	All resident persons.
Numerator:	Hospitalizations (unduplicated*) with a principal or contributing diagnosis of International Classification of Diseases (ICD)-9-CM code 250 and a procedure of ICD-9-CM code 84.1, and not having ICD-9-CM codes 895–897 (traumatic amputation) among residents during a calendar year. Search all diagnostic fields. When possible, include hospitalizations for residents who are hospitalized in another state.
Denominator:	Midyear resident population for the same calendar year.
Measures of Frequency:	Annual hospitalization rate — crude and age-adjusted (standardized by the direct method to the year 2000 standard U.S. population, distribution 8*) — with 95% confidence interval.
Time Period of Case Definition:	Calendar year.
Background:	Diabetes is the leading cause of nontraumatic amputation in the United States, causing approximately 82,000 amputations/year.
Significance :	Multiple long-term complications of diabetes, including amputation, can be prevented through glucose, lipid, and blood pressure regulation, and screening and treatment for foot abnormalities. Means to prevent amputation include improved patient education and self-management.
Limitations of Indicator:	Because approximately one third of cases of diabetes are undiagnosed, years might pass before changes in behavior or clinical practice affect the total incidence of amputation.
Data Resources:	State hospital discharge data (numerator) and population estimates from the U.S. Bureau of the Census or suitable alternative (denominator). <a href="http://www.cdc.gov/diabetes/statistics/">http://www.cdc.gov/diabetes/statistics/</a>
Limitations of Data Resources:	Diagnoses and procedures listed on hospital discharge data might be inaccurate. Practice patterns and payment mechanisms might affect decisions by health-care providers to hospitalize patients. Residents of one state might be hospitalized in another state and not be reflected in the first state's hospital data set. Multiple, but unrecognized, admissions for one person can falsely elevate the number of persons hospitalized. Because state hospital discharge data are not universally available, aggregation of state data to produce nationwide estimates will be incomplete. If this estimate is calculated within the diabetes population, restrict the denominator to only persons with diabetes.
Healthy People 2010 Objectives:	No objective.

\* The term unduplicated means that persons with multiple admissions during the calendar year should only be counted once. † See Klein RJ, Schoenborn CA. Age adjustment using the 2000 projected U.S. population. Hyattsville, MD: US Department of Health and Human Services, CDC, National Center for Health Statistics, 2001. Healthy people 2010 statistical notes, no. 20. <http://www.cdc.gov/nchs/data/statnt/statnt20.pdf>